

season and location, by which one can, with a little looking up of numbers, run down a plant without the use of keys. A pictorial glossary is a further help.

The nine hundred or more flowers described include most of those to be found in the north eastern U. S. with the exception of grasses and sedges. Trees and shrubs are also omitted. In some of the more difficult groups only a few of the most common or striking plants are described—for example, only 18 members of the Umbelliferae, 18 Asters, 14 Goldenrods. Of course, in a work of this kind it is necessary to limit the number of species described and it is sufficient if all the common species can be found easily and one can be reasonably sure of the genus, at least, of other plants. But it is a little hard to understand why certain common species have not been included; for example 12 violets are given, but *V. conspersa* and *V. rostrata* are omitted; 5 species of *Potamogeton* are given but the very common *heterophyllus* is not given.

Common names are printed in small capitals making them more prominent than the scientific ones, as should be the case in a book meant for popular use. The scientific names used are those of Britton and Brown, where the name in Gray's New Manual is different, the latter is given in brackets.

The book is well printed on good quality paper, bound in semiflexible green cloth. It should have a wide appeal to lovers of the out-of-doors who are not equipped to use the standard manuals.

G. T. HASTINGS

TORREY BOTANICAL CLUB FIELD MEETINGS

Early spring field meetings of the Torrey Botanical Club, at the New York and Brooklyn botanical gardens were well attended and interesting. On Saturday afternoon, March 31, Mr. Percy A. Wilson guided a party of forty members and guests through the greenhouses and some outdoor exhibits, at the New York Botanical Garden after which they heard Prof. John M. Coulter's lecture on "The Present Status of Evolution." On April 7, Dr. Alfred Gundersen was host at the Brooklyn Botanic Garden to a group of thirty. In the greenhouses, the exhibit on Evolution of Plants proved interesting, with

progressions from water to land, from rhizoids to roots, from small leaves to large leaves, from spores to seeds, and from cones to flowers. On the outdoor walk, there were in blossom these shrubs: *Cornus Mas*, *Jasminum nudiflorum*, *Corylopsis pauciflora*, *Daphne Mezereum*, *Stachyurus chinensis*, and these bulbs: *Crocus vernus* and *moesiacus* and *Scilla sibirica*; and among herbaceous plants *Helleborus foetidus* and *Adonis amurensis*. Work on the new rose garden, the gift of Mr. and Mrs. Walter V. Cranford, which will be opened this spring, was observed.

RAYMOND H. TORREY

Thirteen members and guests of the Torrey Botanical Club walked across the northern portion of the Hudson Highlands, west of the river, Sunday, April 22, in a drenching rain, that wet through ponchos and "water proofs," before the day was over—yet found much of interest, and after they became inured to the storm, seemed to enjoy the excursion. The trilliums—erectum and cernuum, which the leader, the chairman of the field committee, had advertised as the special attraction, did not perform; spring had been so slow and wet and cold, that only one Wake Robin was found in bloom. Even anemones, and marsh marigold were hesitant in blooming, and hepaticas and spice bush were still in bloom. But arbutus was plentiful and all were pleased to see it increasing in extent, especially along old wood roads in the Stillman Black Rock Forest, where patches ten feet long were common.

The route was from Houghton Farms, on the road from Central Valley to Cornwall, past Green Falls, over Mount Rascal, down Cat Hollow, to the Forest of Dean Iron mines, and down Popolopen Creek to Bear Mountain, where, at the Inn, some of the party, with other wet walkers from the Green Mountain Club, steamed out before the fireplace, and warmed up with hot coffee.

A phenomenon that was odd and new to all the party and which caused much speculation, was evidently due to the drenching rain and would not have been seen on a dry day. Noting patches of foamy bubbles on the bases of white oaks, as large as the palm of one's hand, investigation was made as to the cause. Such frothy patches were found on fully fifty trees,

all white oaks except one, and that an old rough barked red oak. With the rain running off themselves in streams, the members of the party investigated closely and saw that drops of water, gathering on the vertical, slightly concave plates of bark on the white oaks, condensed at the lower tip of the plates, which bend outward slightly and dropped off. Where they struck the butt of the tree two or three feet below, a mass of foam was gathered, constantly renewed as the bubbles burst, by the drops falling from above.

The bubbles had what appeared to be a slightly soapy consistency. Was this effect purely mechanical, or was there some soapiness in the water dripping from the oak bark scales? Could this water be a mild solution of tannic acid and would this be soapy enough to form bubbles when aerated in descent and striking on the bark below? These frothy patches were not seen on smooth barked trees, those with sweet sap, like maples and black birches; the only other species on which they were observed was a rough barked red oak. It was somewhat of an offset to the drenching everyone suffered, to speculate on the cause of these patches of bubbles.

RAYMOND H. TORREY

PROCEEDINGS OF THE CLUB

MEETING OF MARCH 13, 1928

This meeting was held at the American Museum of Natural History, and was called to order at 8:25 P.M. by President Denslow. The following were unanimously elected to membership in the Club:

Dr. Charles W. Ballard, College of Pharmacy of Columbia University, 115 W. 68th St., New York City.

Miss Fanchon Hart, College of Pharmacy, Columbia University, 115 W. 68th St., New York City.

Mr. Victor Lewitus, College of Pharmacy, Columbia University, 115 W. 68th St., New York City.

Mr. Lorens F. Logan, 115 Broadway, New York City.

Dr. William S. Thomas, 1175 Park Ave., New York City.

Miss Helen A. Timmerman, College of Pharmacy, Columbia University, 115 W. 68th St., New York City.

The resignation of Mr. Ludlow Griscom was accepted with regret.